

50. (Twice Amended) An inductively coupled plasma processing system, comprising:

- a plasma processing chamber;
- a substrate holder supporting a substrate having a periphery within said processing chamber, the substrate holder including an electrode;
- an electrically-conductive coil disposed outside said processing chamber;
- a process gas distribution system for introducing a process gas into said processing chamber, the process gas distribution system comprising injectors which direct the process gas along axes that intersect an exposed surface of the substrate at an acute angle, each of the injectors being spaced outwardly from the periphery of the substrate;
- an RF energy source which inductively couples RF energy into the processing chamber to energize the process gas into a plasma state,
- wherein the substrate holder is maintained at a selected temperature during deposition of a material on the substrate by plasma-enhanced chemical vapor deposition.

56. (Twice Amended) The system of Claim 50, wherein the substrate holder comprises a ceramic material and the electrode is buried within the ceramic material.

57. (Amended) The system of Claim 50, wherein the injectors include orifices, each of the orifices orient the process gas along an axis of injection which intersects an exposed surface of the substrate at an acute angle.

58. (Amended) An inductively coupled plasma processing system, comprising:

- a plasma processing chamber;
- a substantially planar electrically-conductive coil;
- a substrate support supporting a substrate having a periphery within the processing chamber;
- a process gas distribution system which provides process gas into the processing chamber, the process gas distribution system including injectors which direct the process gas along axes that intersect an exposed surface of the substrate at an acute angle, each of the injectors being spaced outwardly from the periphery of the substrate; and
- an RF energy source which inductively couples RF energy into the processing chamber to energize the process gas into a plasma state;

wherein the substrate holder is maintained at a selected temperature during deposition of a material on the substrate by plasma-enhanced chemical vapor deposition.

59. (Amended) The system of Claim 50, wherein at least some of the injectors include an orifice oriented relative to the axis thereof to direct the process gas in an upward direction away from the substrate.

60. (Amended) The system of Claim 50, wherein the process gas distribution system comprises a primary gas ring that directs the process gas toward the substrate.

61. (Amended) The system of claim 60, wherein the process gas distribution system further comprises a secondary gas ring, the primary gas ring is between the secondary gas ring and the substrate holder.

62. (Amended) The system of Claim 60, wherein the process gas distribution system comprises injectors connected to the primary gas ring, at least some of the injectors connected to the primary gas ring direct the process gas along axes that intersect an exposed surface of the substrate at an acute angle.

63. (Amended) The system of Claim 62, wherein some of the injectors include an orifice oriented relative to the axis thereof to direct the process gas in an upward direction away from the substrate and toward the dielectric window.

65. (Amended) An inductively coupled plasma processing system, comprising:
a plasma processing chamber;
a substrate support supporting a substrate within the processing chamber, the substrate having a periphery;
an electrode operable to heat the substrate support;
a gas supply for introducing a process gas into the processing chamber, the gas supply including injectors which direct the process gas along axes that intersect an exposed surface of the substrate at an acute angle, each of the injectors being spaced outwardly from the periphery of the substrate; and

an RF energy source inductively coupling RF energy into the processing chamber to energize the process gas into a plasma state,

wherein the electrode is maintained at a selected temperature during deposition of a material on the substrate by plasma-enhanced chemical vapor deposition.

66. (Amended) The system of Claim 65, wherein the substrate support comprises a ceramic material and the electrode is buried within the ceramic material comprising the substrate support.

67. (Amended) The system of Claim 65, further comprising an RF bias power source connected to the electrode, wherein the RF bias power source is operable to regulate a level of RF bias applied to the substrate so as to control the substrate temperature.

71. (New) The system of Claim 50, wherein a plurality of gas flows overlap each other in a plane parallel to an exposed surface of the substrate.